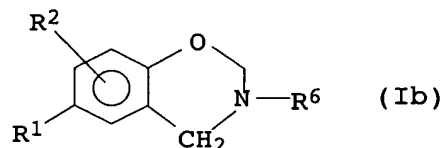
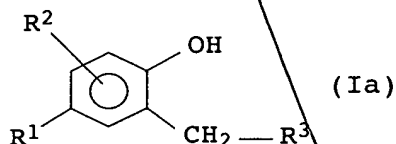


We claim:

1. A process for the preparation of polyisobutenylphenol-
 5 containing Mannich adducts by
- a) alkylation of a phenol with highly reactive polyisobutene
 having a number average molecular weight of less than
 1000 and a polydispersity of less than 3.0 at below about
 10 50°C in the presence of an alkylation catalyst;
- b) reaction of the reaction product from a) with
- b1) an aldehyde chosen from formaldehyde, an oligomer and a
 15 polymer of formaldehyde and
- b2) at least one amine which has at least one primary or at
 least one secondary amino function.

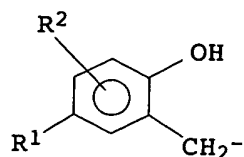
- 20 2. A process as claimed in claim 1, wherein the amine used is
 3-(dimethylamino)-n-propylamine,
 di[3-(dimethylamino)-n-propyl]amine, dimethylamine,
 diethylamine or morpholine.
- 25 3. A process as claimed in either of claims 1 and 2, wherein an
 adduct mixture is obtained which comprises at least 40 mol%
 of compounds of the formula Ia and/or Ib,



35 where

- R^1 is a terminally bonded polyisobutenyl radical,
 R^2 is H, C_1 - to C_{20} -alkyl, C_1 - to C_{20} -alkoxy, hydroxyl,
 40 a polyalkylenyl radical or $CH_2NR^4R^5$, where R^4 and R^5 have
 the meanings stated below, and
- R^3 is NR^4R^5 , where R^4 and R^5 , independently of one another,
 are selected from H, C_1 - to C_{20} -alkyl, C_3 - to
 C_8 -cycloalkyl and C_1 - to C_{20} -alkoxy radicals which may be
 45 interrupted and/or substituted by heteroatoms selected
 from N and O, and phenol radicals of the formula II

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(II)

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where R¹ and R² are as defined above;
 with the proviso that R⁴ and R⁵ are not simultaneously H
 or phenol radicals of the formula II; or R⁴ and R⁵,
 together with the N atom to which they are bonded, form a
 5-, 6- or 7-membered cyclic structure which has one or
 two heteroatoms selected from N and O and may be
 substituted by one, two or three C₁- to C₆-alkyl
 radicals; and

15

R⁶ is a radical R⁴ or R⁵ other than H.

4. A process as claimed in any of the preceding claims, wherein
 an adduct having a polydispersity of from 1.1 to 3.5 is
 obtained.

20

5. A process as claimed in any of the preceding claims, wherein
 R¹ has a number average molecular weight of from 300 to 850.

6. A process as claimed in any of claims 1 to 5, wherein the
 reaction mixture from b) is fractionated by column
 chromatography over an acidic stationary phase by multistage
 elution with

25

- at least one hydrocarbon and then
- at least one basic alcohol/water mixture.

30

7. A process as claimed in claim 6, wherein the basic
 alcohol/water mixture used is a mixture of

35

- a) from 75 to 99.5% by weight of at least one C₂- to
C₄-alcohol,
- b) from 0.4 to 24.4% by weight of water and
- c) from 0.1 to 15% by weight of at least one amine which is
volatile at room temperature.

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8. A process as claimed in any of the preceding claims, wherein
 the adduct mixture obtained includes from 0 to 20 mol%,
 preferably 1 to 15 mol%, of polyisobutenylphenols from
 reaction step a) which have not been further reacted.

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9. A Mannich adduct obtainable by a process as claimed in any of claims 1 to 8.
10. A Mannich adduct comprising at least one compound of the formula Ia and/or Ib.
11. The use of a Mannich adduct as claimed in claim 9 or 10 as a detergent additive in fuel and lubricant compositions.
12. An additive concentrate containing, in addition to conventional additive components, at least one Mannich adduct as claimed in claim 9 or 10 in amounts of from 0.1 to 99.9% by weight, preferably 0.5 to 80% by weight.
13. A fuel composition containing a main amount of a liquid hydrocarbon fuel and an amount, having detergent activity, of at least one adduct as claimed in claim 9 or 10.
14. A lubricant composition containing a main amount of a liquid, semisolid or solid lubricant and an amount, having detergent activity, of at least one adduct as claimed in claim 9 or 10.
15. The use of a fuel composition as claimed in claim 13 as a gasoline or diesel fuel.

add A 3